What is claimed is:

1.   An apparatus for describing three-dimensional
image data, comprising:

5   a descriptor database for storing descriptors
describing characteristics of the three-dimensional image
data at an acquisition procedure, a representing procedure,
and a display procedure;

        a descriptor adding means for reading in a descriptor
10 describing the characteristics of the three-dimensional
image data inputted from outside at each step and adding
the descriptor to the three-dimensional image data; and

        a registration means for registering the three-
dimensional image data with the descriptor endowed by the
15 descriptor adding means in a three-dimensional image data
database.

2.   The apparatus as recited in claim 1, wherein the
descriptor adding means includes:

20   an acquisition descriptor adder for reading in an
acquisition descriptor that describes a step of acquiring
the three-dimensional image data from the descriptor
database and adding the acquisition descriptor to the
three-dimensional image data;

25   a representing descriptor adder for reading in a
representing descriptor that describes a step of
representing the three-dimensional image data from the
descriptor database and adding the representing descriptor
to the three-dimensional image data; and

30   a display descriptor adder for reading in a
representing descriptor that describes a step of displaying
the three-dimensional image data from the descriptor
database and adding the display descriptor to the three-
dimensional image data.

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3.   The apparatus as recited in claim 2, wherein the descriptor database includes an individual descriptor database that stores the acquisition descriptor for describing the step of acquiring the three-dimensional

5   image data, the representing descriptor for describing the step of representing the three-dimensional image data, and the display descriptor for describing the step of displaying the three-dimensional image data.

10   4.   The apparatus as recited in claim 3, wherein the descriptor database further includes an integrated descriptor database that stores integrated descriptors defined as a particular combination of the acquisition descriptor, the representing descriptor and the display

15   descriptor, and
       wherein the descriptor adding means further includes an integrated descriptor adder for reading in an integrated descriptor from the integrated descriptor database and adding the integrated descriptor to the three-dimensional

20   image data.

5.   A method for describing three-dimensional image data, comprising the steps of:
       a)   a   descriptor   adding   unit   recognizing

25   characteristics of the three-dimensional image data at an acquisition procedure, a representing procedure, and a display procedure;
       b) the descriptor adding unit reading in descriptors for describing characteristics of the three-dimensional

30   image data at each step based on the recognition from a descriptor database;
       c) the descriptor adding unit adding the descriptors to the three-dimensional image data; and
       d) the descriptor adding unit registering the three-

35   dimensional image data endowed with the descriptors in a

three-dimensional image data database.

6. The method as recited in claim 5, wherein, at
the step a), the descriptor adding unit recognizes
5 characteristics of steps of acquiring, representing, and
displaying the three-dimensional image data and, at the
step b), the descriptor adding unit reads in an acquisition
descriptor for describing the acquisition procedure, a
representing descriptor for describing the representing
10 procedure, and a display descriptor for describing the
display procedure based on the recognition.

7. The method as recited in claim 6, further
including the steps of:
15 e) the descriptor adding unit determining whether
there is an integrated descriptor defined as a particular
combination of an acquisition descriptor, a representing
descriptor, and a display descriptor; and
f) the descriptor adding unit reading in the
20 integrated descriptor from an integrated descriptor
database and adding the integrated descriptor to the three-
dimensional image data.

8. A computer-readable recording media for
25 recording a program that implements a three-dimensional
image data description method in a three-dimensional image
data description provided with a processor, comprising the
steps of:
a) a descriptor adding unit recognizing
30 characteristics of the three-dimensional image data at an
acquisition procedure, a representing procedure, and a
display procedure;
b) the descriptor adding unit reading in descriptors
for describing characteristics of the three-dimensional
35 image data at each step based on the recognition from a

descriptor database;

      c) the descriptor adding unit adding the descriptors to the three-dimensional image data; and

      d) the descriptor adding unit registering the three-
5 dimensional image data endowed with the descriptors in a three-dimensional image data database.

      9.   The computer-readable recording media as recited in claim 8, further including the steps of:
10   e) the descriptor adding unit determining whether there is an integrated descriptor defined as a particular combination of an acquisition descriptor, a representing descriptor, and a display descriptor; and

      f) the descriptor adding unit reading in the
15 integrated descriptor from an integrated descriptor database and adding the integrated descriptor to the three-dimensional image data.

      10. An apparatus for retrieving three-dimensional
20 image data, comprising:

      an input means for receiving data on characteristics of the three-dimensional image data from a user at an acquisition procedure, a representing procedure, and a display procedure;
25   a descriptor database for storing descriptors based on the characteristics of the three-dimensional image data at the acquisition procedure, the representing procedure, and the display procedure;

      a descriptor abstraction means for abstracting out of
30 the descriptor database a descriptor corresponding to the data inputted from the input means;

      a descriptor comparison means for comparing the descriptor abstracted from the descriptor abstraction means with descriptors of three-dimensional image data stored in
35 a three-dimensional image data database, and retrieving

three-dimensional image data matched with the abstracted
descriptor; and

an output means for outputting the three-dimensional
image data retrieved by the descriptor comparison means to
5   the user.

11.   The apparatus as recited in claim 10, wherein
the descriptor abstraction means includes an individual
descriptor   abstracter   for   abstracting   individual
10   descriptors, which include an acquisition descriptor for
describing a step of acquiring the three-dimensional image
data, a representing descriptor for describing a step of
representing the three-dimensional image data, and a
display descriptor for describing a step of displaying the
15   three-dimensional image data, from the descriptor database.

12.   The apparatus as recited in claim 11, wherein
the descriptor database includes an individual descriptor
database   for   storing   the   acquisition   descriptor   for
20   describing a step of acquiring the three-dimensional image
data, the representing descriptor for describing a step of
representing the three-dimensional image data, and the
display descriptor for describing a step of displaying the
three-dimensional image data.
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13.   The apparatus as recited in claim 12, wherein
the descriptor database further includes an integrated
descriptor database for storing integrated descriptors each
of which is defined as a particular combination of the
30   acquisition descriptor, the representing descriptor and the
display descriptor, and

wherein the descriptor abstraction means further
includes an integrated descriptor abstracter for
abstracting out of the integrated descriptor database an
35   integrated descriptor corresponding to the data inputted

from the input means.

    14.   A method for retrieving three-dimensional image
data, comprising the steps of:

5   a) receiving data on characteristics of the three-
dimensional image data to be retrieved from a user at an
acquisition procedure, a representing procedure, and a
display procedure;

        b) a descriptor abstracting unit abstracting a

10   descriptor matched with the inputted data out of a
descriptor database that stores descriptors matched with
the characteristics of the three-dimensional image data at
the acquisition procedure, the representing procedure, and
the display procedure;

15   c) a descriptor comparison unit comparing the
abstracted descriptor with descriptors of three-dimensional
descriptors stored in a three-dimensional image data
database and retrieving three-dimensional image data
matched with the abstracted descriptor; and

20   d) an output unit outputting the three-dimensional
image data retrieved by the descriptor comparison unit.

    15.   The method as recited in claim 14, wherein the
characteristics of the three-dimensional image data to be

25   retrieved are inputted by the user at the image acquisition
step, the image representing step, and the image display
step in the step a) and

        wherein the descriptor abstracting unit abstracts
descriptors matched with the data inputted from the

30   descriptor database that stores the acquisition descriptor
for describing the image acquisition step, the representing
descriptor for describing the image representing step, and
the display descriptor for describing the image display
step in the step b).

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16. The method as recited in claim 15, further including the steps of:

e) the descriptor abstracting unit determining whether there is an integrated descriptor which is defined
5 as a particular combination of an acquisition descriptor, a representing descriptor, and a display descriptor; and

f) the descriptor abstracting unit abstracting the integrated descriptor out of an integrated descriptor database based on the result of the step e).
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17. A computer-readable recording medium for recording a program that implements a three-dimensional image data retrieving method in a three-dimensional image data retrieving apparatus provided with a processor,
15 comprising the steps of:

a) receiving data on characteristics of the three-dimensional image data to be retrieved from a user at an acquisition procedure, a representing procedure, and a display procedure;

20 b) a descriptor abstracting unit abstracting a descriptor matched with the inputted data out of a descriptor database that stores descriptors matched with the characteristics of the three-dimensional image data at the acquisition procedure, the representing procedure, and
25 the display procedure;

c) a descriptor comparison unit comparing the abstracted descriptor with descriptors of three-dimensional descriptors stored in a three-dimensional image data database and retrieving three-dimensional image data
30 matched with the abstracted descriptor; and

d) an output unit outputting the three-dimensional image data retrieved by the descriptor comparison unit.

18. The computer-readable recording medium as
35 recited in claim 17, further including the steps of: